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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
| 09/758,269 | 01/12/2001 | Satoshi Iuchi | 3914-3 | 9211 |

7590 04/09/2002

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1100 North Glebe Rd.
Arlington, VA 22201-4714

EXAMINER

COLLINS, CYNTHIA E

| ART UNIT | PAPER NUMBER |
|----------|--------------|
|----------|--------------|

1638

DATE MAILED: 04/09/2002

14

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/758,269

Applicant(s)

IUCHI ET AL.

Examiner

Cynthia Collins

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-- **Th MAILING DATE of this communication appears on the cover sheet with the correspondence address --**
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 1 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 12 January 2001 and 29 January 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-14 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☐ Claim(s) _____ is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☒ Claim(s) 1-14 are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

DETAILED ACTION

Applicant's election of Group X in the response filed January 29, 2002, is acknowledged. Upon further consideration, the previous restriction requirement, mailed January 3, 2002, has been withdrawn in favor of the restriction requirement set forth below. The Office regrets any inconvenience to the Applicant.

Election/Restrictions

Restriction to one of the following inventions is required under 35 U.S.C. 121:

- I. Claims 1 and 3-14, drawn to a DNA encoding a protein having a neoxanthin cleavage activity, a transformant plant cell, a transgenic plant, propagation material, a vector, a method for producing a transgenic plant, and a method for increasing or decreasing stress tolerance in a plant, classified in class 800, subclass 289, for example.
- II. Claim 2, drawn to a DNA for reducing stress tolerance in a plant, classified in class 536, subclass 23.6, for example.

For invention I above, restriction to one of inventions (A)-(F) is also required under 35 USC 121. Therefore, if invention I is elected, one of inventions (A)-(F) must also be elected.

- (A) a DNA of SEQ ID NO:1 encoding a protein of SEQ ID NO:2
- (B) a DNA of SEQ ID NO:5 encoding a protein of SEQ ID NO:6
- (C) a DNA of SEQ ID NO:9 encoding a protein of SEQ ID NO:10
- (D) a DNA of SEQ ID NO:11 encoding a protein of SEQ ID NO:12

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- (E) a DNA of SEQ ID NO:13 encoding a protein of SEQ ID NO:14
- (F) a DNA of SEQ ID NO:15 encoding a protein of SEQ ID NO:16

For invention II above, restriction to one of inventions (a)-(c) is also required under 35 USC 121. Therefore, if invention II is elected, one of inventions (a)-(c) must also be elected.

- (a) a DNA encoding an antisense RNA complementary to a transcript of a gene encoding a protein having neoxanthin cleavage activity
- (b) a DNA encoding an RNA comprising a ribozyme activity which cleaves a transcript of a gene encoding a protein having neoxanthin cleavage activity
- (c) a DNA encoding an RNA which inhibits by cosuppression the expression of a gene encoding a protein having neoxanthin cleavage activity

The inventions are distinct, each from the other because of the following reasons:

Inventions I and II are unrelated. Inventions are unrelated if it can be shown that they are not disclosed as capable of use together and they have different modes of operation, different functions, or different effects (MPEP § 806.04, MPEP § 808.01). The DNA of Invention I encodes a protein having neoxanthin cleavage activity, whereas the DNA of Invention II encodes an RNA that inhibits the expression of a gene encoding a protein having neoxanthin cleavage activity. Therefore the different sequences have different modes of operation and different effects.

Inventions (A)-(F) are unrelated. Inventions are unrelated if it can be shown that they are not disclosed as capable of use together and they have different modes of operation, different functions, or different effects (MPEP § 806.04, MPEP § 808.01). In the instant case the different inventions represent structurally different polypeptides and the polynucleotides. Therefore, where structural identity is required, such as for hybridization or expression, the different sequences have different effects.

Inventions (a)-(c) are unrelated. Inventions are unrelated if it can be shown that they are not disclosed as capable of use together and they have different modes of operation, different functions, or different effects (MPEP § 806.04, MPEP § 808.01). In the instant case the different inventions represent DNAs encoding RNAs which inhibit the expression of a gene encoding a protein having neoxanthin cleavage activity by different functional mechanisms. Therefore the different sequences have different modes of operation.

Because these inventions are distinct for the reasons given above and have acquired a separate status in the art as shown by their different classification, their recognized divergent subject matter, and the requirement for different areas of search, restriction for examination purposes as indicated is proper.

Applicant is advised that the reply to this requirement to be complete must include an election of the invention to be examined even though the requirement be traversed (37 CFR 1.143).

Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the

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application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

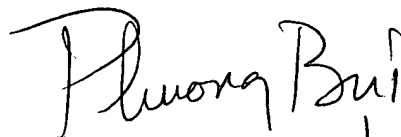
Remarks

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Cynthia Collins whose telephone number is (703) 605-1210. The examiner can normally be reached on Monday-Friday 8:45 AM -5:15 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Amy Nelson can be reached on (703) 306-3218. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 308-4242 for regular communications and (703) 308-4242 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0196.

CC
April 5, 2002


PHUONG T. BUI
PRIMARY EXAMINER 4/5/02